Reg. No.									

Manipal Institute of Technology

(A Constituent Institute of Manipal University)

II SEMESTER M. C. A.
END SEMESTER EXAMINATION – MAY 2016

SUBJECT: ADVANCED COMPUTER NETWORKS [MCA 4202]

07-05-2016

Time : 3 hours | Max. Marks : 50

Instructions to Candidates

1. Answer ANY FIVE FULL questions.
2. Missing data may be suitably assumed.

1A With a neat labelled diagram explain the TCP/IP Architecture.

1B Explain the concept and importance of Framing in DLL.

1C Write the CRC-16 and CRC-32 polynomial representations.

(5 + 3 + 2)

2A Explain the techniques used for Achieving good Quality of Service in Network Communications.

2B An address in a block is given as 73.22.17.25. Find the number of addresses in the block, the first address, and the last address.

2C Distinguish between Circuit and Packet Switching with a relevant example for each.

(5 + 3 + 2)

3A Explain the importance of Load Shedding in Computer Networks

3B What are transparent bridges? Write about the three basic functions performed by a transparent bridge?

3C Write on Block allocation in classless addressing in two or three lines.

(5 + 3 + 2)

4A Describe UDP's relationship to other protocols in the TCP/IP protocol suite. Explain the format of a UDP packet with a neat labelled diagram.

4B What are Port addresses? Explain their importance in data transmission with a block diagram.

4C Write about the two types of transmission technologies that are in widespread use.

(5 + 3 + 2)

5A Explain the Basic Wireless Sensor Network Architectural Elements

5B State and explain the role of Unicast, Multicast, and Broadcast Physical Addresses in Computer Networks.

5C One of the addresses in an assigned address block is 17.63.110.114/24. Find the number of addresses, the first address, and the last address in the block.

(5 + 3 + 2)

6A Describe the Network Layer Services Provided at Each Router

6B Explain the working of a connection-oriented packet switched network with a relevant labeled diagram

6C State and explain the role of Transmission Sequence Number (TSN) and Stream Identifier (SI) in SCTP (5 + 3 + 2)